Nematology Circular No. 58
December 1979

Fla. Dept. Agric. & Consumer Services
Division of Plant Industry

PRATYLENCHUS COFFEAE: A LESION NEMATODE AFFECTING FOLIAGE PLANTS

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The lesion nematodes are members of the genus Pratylenchus, which contains 29 species (4), many of which are recognized to limit agricultural production in many countries. One species, Pratylenchus coffeae (Zimmerman, 1898) Filipjev and Stekhoven, 1941, is recognized as an important limiting factor in the world production of important agricultural crops including coffee, banana and plantains, tea, citrus, and tropical yams. Included among the crops affected by P. coffeae in Florida are citrus (5) and foliage ornamentals (1,2,6).

Effects of Pratylenchus coffeae on Chinese Evergreens

In greenhouse experiments Noegel (6) observed that Chinese evergreens, Aglaonema simplex (Blume), inoculated with P. coffeae after 4 months were stunted in comparison with uninoculated control plants. The basal leaves of nematode-infected plants were chlorotic and drooping. Most roots of inoculated plants were rotted and absent from the cane (stem) base, and those remaining roots possessed an abundance of dark, necrotic areas. These necrotic areas on the roots and the main stem (up to 1 1/8 inches or 3 cm from the base of the cane) yielded moderate to large numbers of P. coffeae.

Noegel (6) observed less damage by P. coffeae to Chinese evergreens when they were grown in sandy soils. He found P. coffeae capable of destroying Chinese evergreens when they were grown in peat.

Relationship of Pratylenchus coffeae and Pythium splendens

In further tests, Noegel (6) also studied the relationship between P. coffeae and Pythium splendens Braun, a root-rotting fungus, on Chinese evergreens. Chinese evergreens inoculated with the fungus alone and those inoculated with the fungus three weeks after the nematode proved to be equally damaging to the roots. Either of these treatments was more severe than when the plants were inoculated with the fungus and nematode simultaneously.

Other Foliage Plant Hosts of Pratylenchus coffeae

Several foliage plants other than Aglaonema simplex (6) have been reported as hosts of Pratylenchus coffeae. They include:

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Aglaonema commutatum Schott in Florida (1)
Caladium sp. in Florida (1)
Chamaedorea sefrizii Burret, a palm, in Florida (1)
Codiaeum variegatum A. Juss., croton, in Florida (1)
Coffea arabica L., coffee, in England and Venezuela (3,8)
Dracaena sp. in Venezuela (8)
Ficus sp. in England (3)
Monstera deliciosa Liebm. in Florida (1)
Philodendron bipennifolium Schott in California (7)
Syngonium podophyllum L. in California (7) and Panama (2)
Vriesia imperialis E. Morr. ex Bak., a bromeliad in Florida (1)

Survey and Detection

1) Plants exhibiting chlorosis and drooping of basal foliage should be examined. Chinese evergreens and plants with similar growth characteristics should be subject to close inspection.

2) If roots of examined plants exhibit numerous dark, necrotic areas, plant roots and stems should be submitted to the Bureau of Nematology Laboratory in Gainesville. If plants do not have roots, decayed and fallen away, the basal portion of the stem should be submitted.

3) Damage to some foliage plants caused by P. coffeae is less in sandy soils and greater in heavier soils.

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